

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TEXARKANA DIVISION**

PANTECH CORPORATION and
PANTECH WIRELESS, LLC

Plaintiffs,

v.

ASUSTEK COMPUTER INC.,

Defendant.

Case No. 5:21-cv-00105-RWS

**FIRST AMENDED COMPLAINT AND
JURY TRIAL DEMANDED**

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiffs Pantech Corporation (“Pantech Corp.”) and Pantech Wireless, LLC (Pantech Wireless”) (collectively, “Plaintiffs”), for this First Amended Complaint for patent infringement against Defendant ASUSTeK Computer Inc. (“ASUSTeK” or “Defendant”), allege the following:

NATURE OF THE ACTION

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1, *et seq.*

THE PARTIES

2. Pantech Corp. is an entity organized under the laws of South Korea, with a place of business at 8, Yangjaecheon-ro 21gil, Suite 402, Seoul, 06748, Republic of Korea.

3. Pantech Wireless is the wholly owned subsidiary of Pantech Corp. Pantech Wireless is an entity organized under the laws of Texas, with a place of business at 3000 Polar Lane, #302, Cedar Park, TX 78613.

4. Defendant ASUSTeK Computer Inc. is a Taiwanese company and has a principal place of business located at No. 15, Li-Te Rd., Beitou, Taipei, Taiwan, R.O.C.

5. On information and belief, ASUSTeK is in the business of providing information and communications technology solutions. Specifically, ASUSTeK provides wireless telecommunications equipment, including smart phones, tablets, 4G LTE Routers, and Laptop/Desktop PCs.

JURISDICTION AND VENUE

6. This Court has subject matter jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1338(a) because the action arises under the patent laws of the United States, 35 U.S.C. § 271, *et seq.*

7. This Court has personal jurisdiction over Defendant pursuant to due process and/or the Texas Long Arm Statute because, inter alia, (i) Defendant has done and continues to do business in Texas; (ii) Defendant has committed and continues to commit acts of patent infringement in the State of Texas, including making, using, offering to sell, and/or selling accused products in Texas, and/or importing accused products into Texas, including by Internet sales and sales via retail and wholesale stores, inducing others to commit acts of patent infringement in Texas, and/or committing a least a portion of any other infringements alleged herein. In addition, or in the alternative, this Court has personal jurisdiction over Defendant pursuant to Fed. R. Civ. P. 4(k)(2).

8. Venue is proper in this district as to Defendant, which is organized under the laws of Taiwan. 28 U.S.C. § 1391(c)(3) provides that “a defendant not resident in the United States may be sued in any judicial district, and the joinder of such a defendant shall be disregarded in determining where the action may be brought with respect to other defendants.”

ACCUSED INSTRUMENTALITIES

9. Defendant makes, uses, sells and offers for sale, provides, and causes to be used, now and within the past six years, mobile phones (*e.g.*, ZenFone series, ROG Phone series), LTE

equipped pads and tablets (*e.g.*, ZenPad series), and LTE equipped PCs and laptops (*e.g.*, NovaGo), and certain other LTE- and 5G-capable devices (the “Accused Instrumentalities”).

10. For example, Defendant advertises that the ZenFone Series smartphones (*e.g.*, ZenFone 8, ZenFone 8 Flip, ZenFone 7, ZenFone 7 Pro, ZenFone 2 Deluxe, ZenFone AR), ROG Phone Series smartphones (*e.g.*, ROG Phone 5, ROG Phone 3), ZenPad tablets (*e.g.*, ZenPad Z10), MeMO Pad 7 tablet, NovaGo TP370QL computer, ROG G75VW computer, and routers (*e.g.*, 4G-AC86U, Wireless-N300, 4G-AC53U) are compliant with LTE cellular network standards and/or 5G cellular network standards.

PATENTS-IN-SUIT

11. The Asserted Patents are U.S. Patent Nos. 9,548,839, 10,841,142, 9,769,776, 9,392,582, 9,763,283, and 10,869,247.

12. U.S. Patent No. 9,548,839 (the “’839 Patent”), is entitled “Method for Mapping Physical Hybrid Automatic Repeat Request Indicator Channel.” On May 7, 2020, Pantech Corp. obtained full and complete ownership, title and interest in the ’839 Patent.¹

13. U.S. Patent No. 10,841,142 (the “’142 Patent”), is entitled “Method and Apparatus for Transmitting and Receiving Reference Signal in Wireless Communication System.” On May 7, 2020, Pantech Corp. obtained full and complete ownership, title and interest in the ’142 Patent.²

¹ The named inventors of the ’839 Patent are Jung Hoon Lee and Joon Kui Ahn. The application was filed May 29, 2015 and the ’839 Patent issued on January 17, 2017. The inventors assigned a parent application, U.S. Patent App. No. 12/388,243 and any continuations thereto, including the application underlying the ’839 Patent, to LG Electronics Inc. on June 18, 2009. LG Electronics, Inc. transferred the interest to Pantech Co., Ltd. on February 15, 2012. On July 6, 2016, Pantech Co., Ltd. transferred the interest to Pantech Inc. On October 31, 2016, Pantech Inc. transferred the interest to Goldpeak Innovations Inc. (“Goldpeak”). On May 7, 2020, Goldpeak transferred the interest to Pantech Corp.

² The named inventor of the ’142 Patent is Sung Jun Yoon. The application was filed February 11, 2019 and the ’142 Patent issued on November 17, 2020. The inventor assigned the parent application, U.S. Patent App. No. 13/891,522 and any continuations thereto, including the application underlying the ’142 Patent, to Pantech Co., Ltd. on May 10, 2013. On July 6, 2016, Pantech Co., Ltd. transferred the interest to Pantech Inc. On October 31, 2016, Pantech Inc. transferred the interest to Goldpeak. On May 7, 2020, Goldpeak transferred the interest to Pantech

14. U.S. Patent No. 9,769,776 (the “’776 Patent”) is entitled “Apparatus and Method for Uplink Synchronizing in Multiple Component Carrier System.” On May 7, 2020, Pantech Corp. obtained full and complete ownership, title and interest in the ’776 Patent.³

15. U.S. Patent No. 9,392,582 (the “’582 Patent”) is entitled “Apparatus and Method for Transmitting/Receiving Activation Indicator Regarding Component Carrier in Wireless Communication System.” On May 7, 2020, Pantech Corp. obtained full and complete ownership, title and interest in the ’582 Patent.⁴

16. U.S. Patent No. 9,763,283 (the “’283 Patent”), is entitled “Method and apparatus for wireless link control in wireless communication system supporting dual connectivity.” On May 6, 2020, Pantech Corp. obtained full and complete ownership, title and interest in the ’283 Patent.⁵

17. U.S. Patent No. 10,869,247 (the “’247 Patent”) is entitled “Supporting Uplink Transmissions.” On April 27, 2021, Pantech Wireless obtained full and complete ownership, title

Corp.

³ The named inventors of the ’776 Patent are Ki Bum Kwon, Jae Hyun Ahn, and Kang Suk Huh. The U.S. patent application was filed on October 31, 2016, published February 16, 2017, and the ’776 Patent issued on September 19, 2017. On March 20, 2013, the inventors assigned the parent application, U.S. Patent App. No. 13/849,296 and any continuations thereto, including the application underlying the ’776 Patent, to Pantech Co., Ltd. On October 22, 2015, Pantech Co. Ltd. transferred the interest to Pantech Inc. On October 31, 2016, Pantech Inc. transferred the interest to Goldpeak. On May 7, 2020, Goldpeak transferred the interest to Pantech Corp.

⁴ The named inventors of the ’582 Patent are Ki Bum Kwon, Myung Cheul Jung, and Sung Jin Seo. The U.S. patent application was filed on May 2, 2013, published September 19, 2013, and the ’582 Patent issued on July 12, 2016. On October 29, 2010, the inventors assigned the parent application, U.S. Patent App. No. 12/916,203 and any continuations thereto, including the application underlying the ’582 Patent, to Pantech Co., Ltd. On July 6, 2016, Pantech Co. Ltd. transferred the interest to Pantech Inc. On October 31, 2016, Pantech Inc. transferred the interest to Goldpeak. On May 7, 2020, Goldpeak transferred the interest to Pantech Corp.

⁵ The named inventors of the ’283 Patent are Myung Cheul Jung, Ki Bum Kwon, Jae Hyun Ahn, and Kang Suk Huh. The patent has a § 371(c) date of October 5, 2015 and issued on September 12, 2017. On October 1, 2015, the inventors assigned interest in the ’283 Patent application to Pantech Co., Ltd. On October 22, 2015, Pantech Co. Ltd. transferred the interest to Pantech Inc. On May 6, 2020, Pantech Inc. transferred the ’283 Patent to Pantech Corporation.

and interest in the '247 Patent.⁶

18. Pantech Corp. is the rightful owner of the '839, '142, '776, '582 and '283 Patents and holds the entire right, title and interest in the '839, '142, '776, '582 and '283 Patents, including the right to collect for past damages.

19. Pantech Wireless is the rightful owner of the '247 Patent and holds the entire right, title and interest in the '247 Patent, including the right to collect for past damages.

BACKGROUND

Pantech Corp.

20. Pantech Co., Ltd., the predecessor in interest to what is now Pantech Corporation⁷, was originally founded in 1991 in Seoul, South Korea as a competitor in the wireless phone marketplace.

21. Throughout the 1990s and 2000s, Pantech rose to become a leading manufacturer of mobile phones. By 2012, Pantech had become the second best-selling Korean handset maker.

22. Pantech's products are sold in South Korea, the United States, Japan, China, Europe, Vietnam, and other countries around the world. Pantech launched operations in the United States in 2003.

⁶ The named inventors of the '247 Patent are Guodong Zhang, Sung-Hyuk Shin, Stephen E. Terry, James M. Miller, and Stephen G. Dick. The U.S. patent application was filed on August 31, 2020 and the '247 Patent issued on December 15, 2020. On October 5, 2006, the inventors assigned the parent application, U.S. Patent App. No. 10/962,720 and any continuations thereto, including the application underlying the '247 Patent, to InterDigital Technology Corporation. On October 11, 2013, InterDigital Technology Corporation transferred the interest to InterDigital Holdings, Inc., who transferred the interest to InterDigital, Inc., who transferred the interest to DST Holdings, Inc. On October 15, 2013, DST Holdings, Inc. transferred the interest to Signal Trust for Wireless Innovation ("Signal Trust"). On December 30, 2020, Signal Trust transferred the interest to RnB Wireless LLC ("RnB Wireless"). On April 27, 2021, RnB Wireless transferred the interest to Pantech Wireless.

⁷ Pantech Co., Ltd. was formed in 1991, and as the result of a restructuring and acquisition in 2015 became Pantech, Inc. Thereafter, Pantech Corporation was formed. Pantech, Inc. transferred its assets to Pantech Corp. as part of an asset sale in 2020 (these three entities are hereinafter referred to collectively as "Pantech").

23. Pantech's portfolio of intellectual property is broad and extensive, comprising thousands of worldwide patents and patent applications in the areas of telecommunications, "smart" devices, and Internet of Things products. Pantech's portfolio, in one aspect, covers wireless communication systems and devices and methods for using those communication systems. In the wireless technology space alone, Pantech holds more than 200 U.S. patents and applications, many of which have been declared standard essential patents.

24. Pantech has invested heavily in research and development, investing, on average, over 10% of its annual revenue in research and development. Pantech's research and development efforts in network technology include, but are not limited to, technologies focused on LTE & 5G networks, WCDMA/CDMA, WiMAX, WiFi, Near Field Communication (NFC), Visible Light Communication, Human Body Communication, Ultra-Wideband Communication and IP Mesh Network.

25. Over the last decade, Pantech has enthusiastically contributed to the 3rd Generation Partnership Project (3GPP) LTE/LTE-A standardization by submitting proposals to TSG RAN, RAN1, and RAN2. Indeed, Pantech secured numerous LTE Standard Essential Patents and patent applications (SEPs) in connection with its contributions. In 2014, National Applied Research Labs in Taiwan reported that Pantech held 1% of LTE-related SEPs, and that number has only increased since 2014.

26. Recognizing the value of its own portfolio and its potential role in the Fourth Industrial Revolution, Pantech has committed to making its intellectual property available in the marketplace, including to competitors. On its website, under the heading "IP Umbrella Services," Pantech offers to exchange intellectual property and technology, and collaborate with competitors and patent holders, through licenses, to enable the market to identify new technological ventures.

27. Pantech Corp. is the owner by assignment of a portfolio of patents, including the Asserted Patents described in Paragraphs 12-16 and in detail in the counts below, that relate to mobile device user interface features and technology for cellular communications networks, including variations or generations of cellular communication network technology such as, but not limited to LTE and 5G, as discussed herein.

Pantech Wireless

28. InterDigital, Inc. (“InterDigital”) is a wireless research and development company that has, for decades, been a pioneer in the development of fundamental wireless technologies that are at the core of mobile devices, networks, and services worldwide. InterDigital has been one of the major contributors to worldwide mobile standards over the past 20 years.

29. In 2013, InterDigital established Signal Trust for Wireless Innovation (“Signal Trust”). The patents and patent applications that comprise Signal Trust were developed by InterDigital, and distributions from Signal Trust were earmarked to support continued research related to cellular wireless technologies, as well as scholarly analysis of intellectual property rights and the technological, commercial, and creative innovations they facilitate.

30. A portion of the patent portfolio created by InterDigital and transferred to Signal Trust was thereafter transferred to RnB Wireless LLC and then to Pantech Wireless.

31. Pantech Wireless is the owner by assignment of a portfolio of patents, including the Asserted Patent described in Paragraph 17 and in detail in the counts below, that relate to technology for cellular communications networks, including variations or generations of cellular communication network technology such as, but not limited to UMTS, WCDMA, 3G, and LTE, as discussed herein.

Negotiations Between the Parties

32. Cellular communication network technology is used to provide data transmission across mobile cellular networks.

33. It is critical for cellular communication network technology to be standardized around the globe. Independent standard-setting organizations, like the European Telecommunications Standards Institute (ETSI), establish global standards for the telecommunication industries. ETSI, along with other standard-setting organizations, have made it possible to have global interoperability between networks, devices and network operators.

34. ETSI sets forth a policy in order to balance intellectual property protections against the need for an open standard by designating certain intellectual property rights (IPR) as “essential.” ETSI sets forth the following definition of “essential”:

“ESSENTIAL” as applied to IPR means that it is not possible on technical (but not commercial) grounds, taking into account normal technical practice and the state of the art generally available at the time of standardization, to make, sell, lease, otherwise dispose of, repair, use or operate EQUIPMENT or METHODS which comply with a STANDARD without infringing that IPR. For the avoidance of doubt in exceptional cases where a STANDARD can only be implemented by technical solutions, all of which are infringements of IPRs, all such IPRs shall be considered ESSENTIAL.

Clause 15.6 of the ETSI IPR Policy, <https://www.etsi.org/images/files/IPR/etsi-ipr-policy.pdf>.

35. ASUSTeK is required to have a license to one or more essential patents owned by Pantech and Pantech Wireless including the Asserted Patents that are identified as essential.

36. Pantech Corp., through its predecessor-in-interest, Goldpeak, first sent a letter to Mr. Vincent Hong, General Counsel of ASUSTeK Computer, Inc., on March 22, 2018 offering to license patents currently owned and/or managed by Pantech Corp., including those that are essential to cellular standards including LTE and LTE-Advanced. The correspondence identified ASUSTeK products that were covered by claims of the offered patents, such as ZenPADZ10,

ZenFone V, ZenFone V Live and ZenPad Z8s, and attached a list of Pantech's patents, including those covering ASUSTeK's products.

37. Since then, Pantech Corp., directly or through its predecessors-in-interest, engaged in additional communication with ASUSTeK through emails, letters, and telephonic meetings regarding licensing patents owned by Pantech Corp. and Pantech Wireless, including those that are essential to cellular standards including LTE. Pantech provided detailed proposals to and discussions of the portfolio with ASUSTeK on at least June 12, 2020, October 26, 2020, November 17, 2020, December 22, 2020, January 6, 2021, February 5, 2021, March 31, 2021, April 20, 2021, May 12, 2021, June 7, 2021, June 25, 2021, and June 28, 2021. Pantech has continuously attempted to license its patents for more than a year—including the patents asserted herein—on fair and reasonable terms, yet ASUSTeK has still elected not to license Pantech Corp.'s patents. Rather, on August 3, ASUSTeK made an unreasonable counteroffer to Pantech. After being informed of the unreasonableness of its offer, ASUSTeK provided no response. The result is that ASUSTeK has continued, and continues today, to make, use, sell and offer for sale Pantech Corp.'s patented technology without license.

38. On May 12, 2021, counsel for Pantech Corp. and Pantech Wireless also provided ASUSTeK notice that Pantech Wireless had acquired the Signal Trust portfolio of patents and provided ASUSTeK with a licensing offer that included such patents. On information and belief, ASUSTeK had been previously aware of the Pantech Wireless patents due to a prior license between ASUSTeK and InterDigital, which did not cover 4G but did cover earlier communication standards. Since then, the parties have had additional communications, as noted above, but ASUSTeK has still elected not to license Pantech Wireless's patents on reasonable terms.

39. In accordance with ETSI's policy, Plaintiffs provided ASUSTeK with multiple license offers on terms that are fair, reasonable and non-discriminatory ("FRAND") for both the Pantech Corp. and Pantech Wireless patents. The United States Department of Justice, with the United States Patent and Trademark Office (USPTO) and the National Institute of Standards and Technology (NIST), have made clear that patent owners and potential licensees of essential patents should "engage in good-faith negotiations to reach F/RAND license terms" to "help reduce the costs and other burdens associated with litigation." 2019 Policy Statement on Remedies for SEPs Subject to Voluntary F/RAND Commitments, <https://www.justice.gov/atr/page/file/1228016/download> (December 19, 2019).

40. Pantech Corp. and Pantech Wireless have made continuous and good faith efforts to negotiate, including but not limited to providing technical details regarding the Asserted Patents and their "standards essential" nature and offering to license the Asserted Patents and other offered patents on FRAND terms. However, Defendant has not engaged in good faith discussions or negotiations with Pantech Corp. or Pantech Wireless.

41. Defendant has been operating and continues to operate without a license to Plaintiffs' standards-essential and other patents. The parties' licensing negotiations to-date have been unsuccessful because Defendant refuses to accept Plaintiffs' fair, reasonable and non-discriminatory licensing terms.

COUNT I – INFRINGEMENT OF U.S. PATENT NO. 9,548,839

42. The allegations set forth in the foregoing paragraphs 1 through 41 are incorporated into this claim for relief.

43. On January 17, 2017 the '839 Patent, entitled "Method for Mapping Physical Hybrid Automatic Repeat Request Indicator Channel" was duly and legally issued by the United States Patent and Trademark Office from U.S. Patent Application No. 14/726,014, filed on May

29, 2015. The '839 Patent claims foreign priority to KR 10-2008-0124084, filed on December 8, 2008. A true and correct copy of the '839 Patent is attached as Exhibit 1.

44. Pantech Corp. is the assignee and owner of all right, title and interest in and to the '839 Patent, including the right to assert all causes of action arising under said patent and the right to any remedies for its infringement.

45. The '839 Patent discloses apparatuses and methods for mapping a physical hybrid automatic repeat request indicator channel (PHICH) to at least one orthogonal frequency division multiplexing (OFDM) symbol. Indexes of resource element groups in which the PHICH is transmitted are determined according to a ratio involving the number of available resource element groups in the OFDM symbol. For example, claim 9 of the '839 Patent recites elements of PHICH mapping mandated by the LTE standard, including at least 3GPP TS 36.211, TS 36.331, and TS 36.213.

46. Upon information and belief, Defendant has and continues to directly infringe at least claim 9 of the '839 Patent by making, using, selling, importing, offering to sell within the United States, and providing to and within the United States, Accused Instrumentalities that practice at least claim 9 of the '839 Patent (the "ASUS Accused '839 Instrumentalities"). Defendant also has and continues to directly infringe at least claim 9 by practicing claim 9 through the ASUS Accused '839 Instrumentalities, and by causing the ASUS Accused '839 Instrumentalities to practice the patented inventions.

47. ASUS Accused '839 Instrumentalities include, for example, the ZenFone 8 smartphone, ZenPad Z10 tablet, NovaGo TP370QL laptop, 4G-AC86U router, and other LTE-compatible products that support PHICH usage. On information and belief, each of the ASUS

Accused '839 Instrumentalities incorporates at least one processor configured to comply with LTE and to support PHICH usage.

48. Defendant was made aware of the '839 Patent and its infringement thereof at least as early as September 17, 2020, when Pantech provided exemplary claim charts to ASUSTeK demonstrating such infringement.

49. Since at least as early as September 17, 2020, Defendant's infringement will have been, and continue to be willful.

50. Upon information and belief, the ASUS Accused '839 Instrumentalities are used, marketed, provided to, and/or used by or for Defendant's partners, clients, customers/subscribers and end users across the country and in this district.

51. Upon information and belief, Defendant has induced and continues to induce others to infringe at least claim 9 of the '839 Patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including, but not limited to Defendant's partners, clients, customers/subscribers, and end users, whose use of the ASUS Accused '839 Instrumentalities constitute direct infringement of at least one claim of the '839 Patent.

52. In particular, Defendant's actions that aid and abet others such as its partners, customers/subscribers, clients, and end users to infringe include advertising and distributing the ASUS Accused '839 Instrumentalities, and providing instruction materials, training and services regarding the ASUS Accused '839 Instrumentalities.

53. Any party, including Defendant's partners, clients, customers/subscribers, and end users, using the ASUS Accused '839 Instrumentalities necessarily infringes the '839 Patent because the inventions of the '839 Patent are required to comply with the relevant cellular standard.

Defendant advertises its ASUS Accused '839 Instrumentalities as compliant with LTE, which induces others to infringe the '839 Patent. Defendant has knowingly induced infringement since at least as early as September 17, 2020, when Defendant was made aware of the '839 Patent.

54. Upon information and belief, Defendant is liable as a contributory infringer of the '839 Patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States the ASUS Accused '839 Instrumentalities that infringe the patented inventions, to be especially made or adapted for use in an infringement of the '839 Patent. Each of the ASUS Accused '839 Instrumentalities is a material component for use in practicing the '839 Patent and is specifically made and not a staple article of commerce suitable for substantial non-infringing use. In particular, each of the ASUS Accused '839 Instrumentalities is advertised to be compliant with the relevant standards and primarily used in compliance with such standards.

55. Pantech Corp. has been harmed by Defendant's infringing activities.

COUNT II – INFRINGEMENT OF U.S. PATENT NO. 10,841,142

56. The allegations set forth in the foregoing paragraphs 1 through 55 are incorporated into this claim for relief.

57. On November 17, 2020 the '142 Patent, entitled "Method and Apparatus for Transmitting and Receiving Reference Signal in Wireless Communication System," was duly and legally issued by the United States Patent and Trademark Office from U.S. Patent Application No. 16/272,473, filed on February 11, 2019. The '142 Patent claims foreign priority to KR 10-2012-0050406, filed on May 11, 2012. A true and correct copy of the '142 Patent is attached as Exhibit 2.

58. Pantech Corp. is the assignee and owner of all right, title and interest in and to the '142 Patent, including the right to assert all causes of action arising under said patent and the right to any remedies for infringement of it.

59. The '142 Patent discloses at least a method and an apparatus for transmitting and receiving a reference signal in a wireless communication system. For example, the '142 Patent discloses a method of using a reference signal by a User Equipment (UE) in a wireless communication system that includes a cyclic shift hopping initial value parameter and a virtual cell identifier parameter, and using the cyclic shift hopping initial value parameter and virtual cell identifier parameter to determine a base sequence of a reference signal sequence and a cyclic shift value of the reference signal sequence for the reference signal, and generating and transmitting a reference signal based on those values. Compliance with 3GPP TS 36.211 and TS 36.331, as required by at least the LTE cellular standard, requires the use of the inventions recited in at least claim 1 of the '142 Patent, including the functionality described in this paragraph.

60. Upon information and belief, Defendant has and continues to directly infringe at least claim 1 of the '142 Patent by making, using, selling, importing, offering to sell within the United States, and providing to and within the United States, Accused Instrumentalities that practice at least claim 1 of the '142 Patent (the "ASUS Accused '142 Instrumentalities"). Defendant also has and continues to directly infringe at least claim 1 by practicing claim 1 through the ASUS Accused '142 Instrumentalities, and by causing the ASUS Accused '142 Instrumentalities to practice the patented inventions.

61. ASUS Accused '142 Instrumentalities include, for example, the ZenFone 2 Deluxe smartphone, ZenPad Z10 tablet, 4G-AC86U router, and other LTE-compatible products that support the use of reference signals in compliance with 3GPP TS 36.211 and TS 36.331. On information and belief, each of the ASUS Accused '142 Instrumentalities incorporates at least one processor configured to comply with one or more of LTE Advanced, LTE Release 10 or later cellular communication protocols. Each of the ASUS Accused '142 Instrumentalities incorporates

at least one processor configured to operate as a LTE Category 6 (cat6, cat-6) or higher category level. Each of the ASUS Accused '142 Instrumentalities incorporates at least one processor configured to support LTE TDD duplex modes.

62. ASUS Accused '142 Instrumentalities incorporate a chipset, application processor, SoC, or system-on-chip that, on information and belief, operate as a LTE Category 6 (cat6, cat-6) or higher category level, and/or support LTE TDD duplex modes. On information and belief, each incorporated chipset, application processor, SoC, or system-on-chip complies with one or more of LTE Advanced, LTE Release 10 or later cellular communication protocols including at least 3GPP TS 36.211 and 3GPP TS 36.213.

63. Defendant was made aware of the '142 Patent and its infringement thereof at least as early as March 31, 2021, when Pantech Corp.'s counsel provided an exemplary claim chart to ASUSTeK demonstrating such infringement.

64. Since at least March 31, 2021, Defendant's infringement will have been, and continue to be willful.

65. Upon information and belief, the ASUS Accused '142 Instrumentalities are used, marketed, provided to, and/or used by or for Defendant's partners, clients, customers/subscribers and end users across the country and in this district.

66. Upon information and belief, Defendant has induced and continues to induce others to infringe at least claim 1 of the '142 Patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including, but not limited to Defendant's partners, clients, customers/subscribers, and end users, whose use of the ASUS Accused '142 Instrumentalities constitute direct infringement of at least one claim of the '142 Patent.

67. In particular, Defendant's actions that aid and abet others such as its partners, customers/subscribers, clients, and end users to infringe include advertising and distributing the ASUS Accused '142 Instrumentalities, and providing instruction materials, training and services regarding the ASUS Accused '142 Instrumentalities.

68. Any party, including Defendant's partners, clients, customers/subscribers, and end users, using the ASUS Accused '142 Instrumentalities necessarily infringes the '142 Patent because the inventions of the '142 Patent are required to comply with the LTE cellular standard (3GPP TS 36.211 and 36.331). Defendant advertises its ASUS Accused '142 Instrumentalities as compliant with LTE, which induces others to infringe the '142 Patent. Defendant has knowingly induced infringement since at least as early as March 31, 2021, when Defendant was made aware of the '142 Patent.

69. Upon information and belief, Defendant is liable as a contributory infringer of the '142 Patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States the ASUS Accused '142 Instrumentalities that infringe the patented inventions, to be especially made or adapted for use in an infringement of the '142 Patent. Each of the ASUS Accused '142 Instrumentalities is a material component for use in practicing the '142 Patent and is specifically made and not a staple article of commerce suitable for substantial non-infringing use. In particular, each of the ASUS Accused '142 Instrumentalities is advertised to be compliant with the relevant standards and primarily used in compliance with such standards.

70. Pantech Corp. has been harmed by Defendant's infringing activities.

COUNT III – INFRINGEMENT OF U.S. PATENT NO. 9,769,776

71. The allegations set forth in the foregoing paragraphs 1 through 70 are incorporated into this claim for relief.

72. On September 19, 2017, the '776 Patent, entitled "Apparatus and Method for Uplink Synchronizing in Multiple Component Carrier System" was duly and legally issued by the United States Patent and Trademark Office from U.S. Patent Application No. 15/338,993, filed on October 31, 2016. The '776 Patent claims foreign priority to KR 10-2012-0030216, filed on March 23, 2012. A true and correct copy of the '776 Patent is attached as Exhibit 3.

73. Pantech Corp. is the assignee and owner of all right, title and interest in and to the '776 Patent, including the right to assert all causes of action arising under said patent and the right to any remedies for its infringement.

74. The '776 Patent discloses apparatuses and methods for uplink synchronizing in multiple component carrier system. For example, a user equipment receives cell index information associated with a serving cell, e.g. secondary serving cell, to be released or a serving cell to be added along with an identifier for a timing advance group (TAG) associated with the serving cell to be added. When adding a serving cell such as a secondary serving cell, the user equipment associates the added serving cell with another available serving cell having with the same TAG identifier. For example, claim 5 of the '776 Patent recites elements of the claimed uplink synchronizing in multiple component carrier system mandated by the 5G standard, including at least 3GPP TS 38.321 and TS 38.331.

75. Upon information and belief, Defendant has and continues to directly infringe at least claim 5 of the '776 Patent by making, using, selling, importing, offering to sell within the United States, and providing to and within the United States, Accused Instrumentalities that practice at least claim 5 of the '776 Patent (the "ASUS Accused '776 Instrumentalities"). Defendant also has and continues to directly infringe at least claim 5 by practicing claim 5 through

the ASUS Accused '776 Instrumentalities, and by causing the ASUS Accused '776 Instrumentalities to practice the patented inventions.

76. ASUS Accused '776 Instrumentalities include, for example, the ZenFone 8 smartphone and other 5G-compatible products that support 5G and/or NR. On information and belief, each of the ASUS Accused '776 Instrumentalities incorporates at least one processor or modem, e.g. Snapdragon 888 5G Mobile Platform, configured to comply with support 5G and/or NR. On information and belief, the processor or modem incorporated in each of the ASUS Accused '776 Instrumentalities is configured to support uplink synchronizing in multiple component carrier system as mandated by the 5G and/or NR standard, including at least 3GPP TS 38.321 and TS 38.331.

77. Defendant was made aware of the '776 Patent and its infringement thereof at least as early as the filing of Plaintiffs' Original Complaint on August 27, 2021.

78. Since at least as early as the filing of Plaintiffs' Original Complaint on August 27, 2021, Defendant's infringement will have been, and continue to be willful.

79. Upon information and belief, the ASUS Accused '776 Instrumentalities are used, marketed, provided to, and/or used by or for Defendant's partners, clients, customers/subscribers and end users across the country and in this district.

80. Upon information and belief, Defendant has induced and continues to induce others to infringe at least claim 5 of the '776 Patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including, but not limited to Defendant's partners, clients, customers/subscribers, and end users, whose use of the ASUS Accused '776 Instrumentalities constitute direct infringement of at least one claim of the '776 Patent.

81. In particular, Defendant's actions that aid and abet others such as its partners, customers/subscribers, clients, and end users to infringe include advertising and distributing the ASUS Accused '776 Instrumentalities, and providing instruction materials, training and services regarding the ASUS Accused '776 Instrumentalities.

82. Any party, including Defendant's partners, clients, customers/subscribers, and end users, using the ASUS Accused '776 Instrumentalities necessarily infringes the '776 Patent because the inventions of the '776 Patent are required to comply with the relevant cellular standard. Defendant advertises its ASUS Accused '776 Instrumentalities as compliant with 5G, which induces others to infringe the '776 Patent. Defendant has knowingly induced infringement since at least as early as the filing of Plaintiffs' Original Complaint on August 27, 2021, when Defendant was made aware of the '776 Patent.

83. Upon information and belief, Defendant is liable as a contributory infringer of the '776 Patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States the ASUS Accused '776 Instrumentalities that infringe the patented inventions, to be especially made or adapted for use in an infringement of the '776 Patent. Each of the ASUS Accused '776 Instrumentalities is a material component for use in practicing the '776 Patent and is specifically made and not a staple article of commerce suitable for substantial non-infringing use. In particular, each of the ASUS Accused '776 Instrumentalities is advertised to be compliant with the relevant standards and primarily used in compliance with such standards.

84. Pantech Corp. has been harmed by Defendant's infringing activities.

COUNT IV – INFRINGEMENT OF U.S. PATENT NO. 9,392,582

85. The allegations set forth in the foregoing paragraphs 1 through 84 are incorporated into this claim for relief.

86. On July 12, 2016 the '582 Patent, entitled "Apparatus and Method for Transmitting/Receiving Activation Indicator Regarding Component Carrier in Wireless Communication System" was duly and legally issued by the United States Patent and Trademark Office from U.S. Patent Application No. 13/875,808, filed on May 2, 2013. The '582 Patent claims foreign priority to KR 10-2009-0104586, filed on October 30, 2009. A true and correct copy of the '582 Patent is attached as Exhibit 4.

87. Pantech Corp. is the assignee and owner of all right, title and interest in and to the '582 Patent, including the right to assert all causes of action arising under said patent and the right to any remedies for its infringement.

88. The '582 Patent discloses apparatuses and methods for transmitting/receiving activation indicator regarding component carrier in wireless communication system. In a wireless communication system having independently managed frequency bands, a user equipment receives, through radio resource control (RRC), configuration information indicating a component carrier (CC) through which system information of another CC configured by a user equipment (UE) is received. The user equipment also receives medium access control (MAC) signaling information providing indicators for configured CCs in a bit-stream consisting of eight bits. The user equipment uses the MAC signaling information to activate a corresponding CC and receive at least a control channel and a data channel by monitoring the activated CC. For example, claim 5 of the '582 Patent recites elements for supporting activation/deactivation of component carrier (CC) by a user equipment (UE) in a wireless communication system mandated by the LTE standard, including at least 3GPP TS 36.300, TS 36.331, and TS 36.321, and by the 5G standard, including at least 3GPP TS 38.300, TTS 38.331, and TS 38.321.

89. Upon information and belief, Defendant has and continues to directly infringe at least claims 5-7 of the '582 Patent by making, using, selling, importing, offering to sell within the United States, and providing to and within the United States, Accused Instrumentalities that practice at least claims 5-7 of the '582 Patent (the "ASUS Accused '582 Instrumentalities"). Defendant also has and continues to directly infringe at least claims 5-7 by practicing claims 5-7 through the ASUS Accused '582 Instrumentalities, and by causing the ASUS Accused '582 Instrumentalities to practice the patented inventions.

90. ASUS Accused '582 Instrumentalities include, for example, the ZenFone 2 Deluxe smartphone, and other LTE- and/or 5G-compatible products that support activation/deactivation of component carrier (CC) in a wireless communication system. On information and belief, each of the ASUS Accused '582 Instrumentalities incorporates at least one processor and/or modem configured to comply with LTE and/or 5G and to support activation/deactivation of component carrier (CC) in a wireless communication system.

91. Defendant was made aware of the '582 Patent and its infringement thereof at least as early as the December 22, 2020, when the patent was identified in correspondence sent to ASUS by counsel for Pantech.

92. Since at least as December 22, 2020, Defendant's infringement will have been, and continue to be willful.

93. Upon information and belief, the ASUS Accused '582 Instrumentalities are used, marketed, provided to, and/or used by or for Defendant's partners, clients, customers/subscribers and end users across the country and in this district.

94. Upon information and belief, Defendant has induced and continues to induce others to infringe at least claims 5-7 of the '582 Patent under 35 U.S.C. § 271(b) by, among other things,

and with specific intent or willful blindness, actively aiding and abetting others to infringe, including, but not limited to Defendant's partners, clients, customers/subscribers, and end users, whose use of the ASUS Accused '582 Instrumentalities constitute direct infringement of at least one claim of the '582 Patent.

95. In particular, Defendant's actions that aid and abet others such as its partners, customers/subscribers, clients, and end users to infringe include advertising and distributing the ASUS Accused '582 Instrumentalities, and providing instruction materials, training and services regarding the ASUS Accused '582 Instrumentalities.

96. Any party, including Defendant's partners, clients, customers/subscribers, and end users, using the ASUS Accused '582 Instrumentalities necessarily infringes the '582 Patent because the inventions of the '582 Patent are required to comply with the relevant cellular standard. Defendant advertises its ASUS Accused '582 Instrumentalities as compliant with LTE and/or 5G, which induces others to infringe the '582 Patent. Defendant has knowingly induced infringement since at least as early as December 22, 2020, when Defendant was made aware of the '582 Patent.

97. Upon information and belief, Defendant is liable as a contributory infringer of the '582 Patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States the ASUS Accused '582 Instrumentalities that infringe the patented inventions, to be especially made or adapted for use in an infringement of the '582 Patent. Each of the ASUS Accused '582 Instrumentalities is a material component for use in practicing the '582 Patent and is specifically made and not a staple article of commerce suitable for substantial non-infringing use. In particular, each of the ASUS Accused '582 Instrumentalities is advertised to be compliant with the relevant standards and primarily used in compliance with such standards.

98. Pantech Corp. has been harmed by Defendant's infringing activities.

COUNT V – INFRINGEMENT OF U.S. PATENT NO. 9,763,283

99. The allegations set forth in the foregoing paragraphs 1 through 98 are incorporated into this claim for relief.

100. On September 12, 2017, the '283 Patent, entitled "Method and Apparatus for Wireless Link Control in Wireless Communication System Supporting Dual Connectivity," was duly and legally issued by the United States Patent and Trademark Office from U.S. Patent Application No. 14/782,534, which has a § 371(c) date of October 5, 2015. The '283 Patent claims foreign priority to KR 10-2013-0037776, filed on April 5, 2013. A true and correct copy of the '283 Patent is attached as Exhibit 5.

101. Pantech Corp. is the assignee and owner of all right, title and interest in and to the '283 Patent, including the right to assert all causes of action arising under said patent and the right to any remedies for infringement of it.

102. The '283 Patent discloses at least an apparatus and method for radio link control by a user equipment which is dually connected to a master base station and a secondary base station. The '283 Patent is directed to a user equipment that detects a radio link failure (RLF) for a secondary serving cell provided by a secondary base station, generates an RLF indicator indicating occurrence of the RLF for the secondary serving cell when the RLF for the secondary serving cell is detected, and transmits the RLF indicator to the master base station connected through radio resource control (RRC). Further, the RLF indicator comprises a cell identifier (cell ID), and the user equipment stops uplink transmission of physical uplink shared channel (PUSCH), physical uplink control channel (PUCCH), and sounding reference signal (SRS) to the secondary serving cell, based on the RLF for the secondary serving cell. For example, claims 9-10 of the '283 Patent recite elements of the claimed radio link control to support dual connectivity mandated by the 5G standard, including at least 3GPP TS 38.331 and TS 38.101-3.

103. Upon information and belief, Defendant has and continues to directly infringe at least claims 9-10 of the '283 Patent by making, using, selling, importing, offering to sell within the United States, importing into the United States, and providing to and within the United States, Accused Instrumentalities that practice at least claims 9-10 of the '283 Patent (the "ASUS Accused '283 Instrumentalities"). Defendant also has and continues to directly infringe at least claims 9-10 by practicing claims 9-10 through the ASUS Accused '283 Instrumentalities, and by causing the ASUS Accused '283 Instrumentalities to practice the patented inventions.

104. ASUS Accused '283 Instrumentalities include, for example, the ZenFone 8 smartphone and other 5G-compatible products that support 5G and radio link control in dual connectivity. On information and belief, each of the ASUS Accused '283 Instrumentalities incorporates at least one processor or modem, e.g. Snapdragon 888 5G Mobile Platform, configured to comply with or support 5G including performing radio link control to support dual connectivity. On information and belief, the processor or modem incorporated in each of the ASUS Accused '283 Instrumentalities is configured to support detection of a radio link failure, generation of a radio link failure indicator, and transmission of a radio link failure indicator such that the radio link failure indicator comprises a cell identifier, and the ASUS Accused '283 Instrumentalities stop uplink transmission of physical uplink shared channel (PUSCH), physical uplink control channel (PUCCH), and sounding reference signal (SRS) to the secondary serving cell, based on the radio link failure for the secondary serving cell, as mandated by the 5G standard, including at least 3GPP TS 38.331 and TS 38.101-3.

105. Defendant was made aware of the '283 Patent and its infringement thereof at least as early as the filing of this First Amended Complaint.

106. Since at least as early as the filing of this First Amended Complaint, Defendant's infringement will have been, and continue to be willful.

107. Upon information and belief, the ASUS Accused '283 Instrumentalities are used, marketed, provided to, and/or used by or for Defendant's partners, clients, customers/subscribers and end users across the country and in this district.

108. Upon information and belief, Defendant has induced and continues to induce others to infringe at least claims 9-10 of the '283 Patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including, but not limited to Defendant's partners, clients, customers/subscribers, and end users, whose use of the ASUS Accused '283 Instrumentalities constitute direct infringement of at least claims 9-10 of the '283 Patent.

109. In particular, Defendant's actions that aid and abet others such as its partners, customers/subscribers, clients, and end users to infringe include advertising and distributing the ASUS Accused '283 Instrumentalities, and providing instruction materials, training and services regarding the ASUS Accused '283 Instrumentalities.

110. Any party, including Defendant's partners, clients, customers/subscribers, and end users, using the ASUS Accused '283 Instrumentalities necessarily infringes the '283 Patent because the inventions of the '283 Patent are required to comply with the relevant cellular standard. Defendant advertises its ASUS Accused '283 Instrumentalities as compliant with 5G, which induces others to infringe the '283 Patent. Defendant has knowingly induced infringement since at least as early as the filing of this First Amended Complaint, when Defendant was made aware of the '283 Patent.

111. Upon information and belief, Defendant is liable as a contributory infringer of the '283 Patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States the ASUS Accused '283 Instrumentalities that infringe the patented inventions, to be especially made or adapted for use in an infringement of the '283 Patent. Each of the ASUS Accused '283 Instrumentalities is a material component for use in practicing the '283 Patent and is specifically made and not a staple article of commerce suitable for substantial non-infringing use. In particular, each of the ASUS Accused '283 Instrumentalities is advertised to be compliant with the relevant standards and primarily used in compliance with such standards.

112. Pantech Corp. has been harmed by Defendant's infringing activities.

COUNT VI – INFRINGEMENT OF U.S. PATENT NO. 10,869,247

113. The allegations set forth in the foregoing paragraphs 1 through 112 are incorporated into this claim for relief.

114. On December 15, 2020, the '247 Patent, entitled "Supporting Uplink Transmissions," was duly and legally issued by the United States Patent and Trademark Office from U.S. Patent Application No. 17/008,439, filed on August 31, 2020. The '247 Patent claims priority to at least provisional application No. 60/517,656, filed on November 5, 2003. A true and correct copy of the '247 Patent is attached as Exhibit 6.

115. Pantech Wireless is the assignee and owner of all right, title and interest in and to the '247 Patent, including the right to assert all causes of action arising under said patent and the right to any remedies for infringement of it.

116. The '247 Patent discloses at least a method and an apparatus for supporting uplink transmissions. For example, the '247 Patent discloses a method of transmitting a data block to a base station using a hybrid automatic repeat request (H-ARQ) process, receiving uplink scheduling information from the base station, and determining whether to retransmit the data block based on

the received uplink scheduling information and not based on whether the UE has received a negative acknowledgment (NACK) from the base station. Compliance with 3GPP TS 36.212 and TS 36.321, as required by at least the LTE cellular standard, requires the use of the inventions recited in at least claims 11, 12, and 18 of the '247 Patent, including the functionality described in this paragraph.

117. Upon information and belief, Defendant has and continues to directly infringe at least claims 11, 12, and 18 of the '247 Patent by making, using, selling, importing, offering to sell within the United States, and providing to and within the United States, Accused Instrumentalities that practice at least claims 11, 12, and 18 of the '247 Patent (the "ASUS Accused '247 Instrumentalities"). Defendant also has and continues to directly infringe at least claims 11, 12, and 18 by practicing claims 11, 12, and 18 through the ASUS Accused '247 Instrumentalities, and by causing the ASUS Accused '247 Instrumentalities to practice the patented inventions.

118. ASUS Accused '247 Instrumentalities include, for example, the ZenFone 2 Deluxe smartphone, ZenPad Z10 tablet, 4G-AC86U router, and other LTE-compatible products that transmit data using a hybrid automatic repeat request (H-ARQ) in compliance with 3GPP TS 36.212 and TS 36.321. On information and belief, each of the ASUS Accused '247 Instrumentalities incorporates at least one processor configured to comply with one or more of LTE Advanced, LTE Release 10 or later cellular communication protocols. Each of the ASUS Accused '247 Instrumentalities incorporates at least one processor configured to operate as a LTE Category 6 (cat6, cat-6) or higher category level. Each of the ASUS Accused '247 Instrumentalities incorporates at least one processor configured to support LTE TDD duplex modes.

119. Certain exemplary ASUS Accused '247 Instrumentalities incorporate a chipset, application processor, SoC, or system-on-chip that, on information and belief, operates as a LTE Category 6 (cat6, cat-6) or higher category level, and/or supports LTE TDD duplex modes. On information and belief, each incorporated chipset, application processor, SoC, or system-on-chip complies with one or more of LTE Advanced, LTE Release 10 or later cellular communication protocols including at least 3GPP TS 36.321 and 3GPP TS 36.212.

120. Defendant was made aware of the '247 Patent and its infringement thereof at least as early as the filing of Plaintiffs' Original Complaint on August 27, 2021.

121. Since at least as early as the filing of Plaintiffs' Original Complaint on August 27, 2021, Defendant's infringement will have been, and continue to be willful.

122. Upon information and belief, the ASUS Accused '247 Instrumentalities are used, marketed, provided to, and/or used by or for Defendant's partners, clients, customers/subscribers and end users across the country and in this district.

123. Upon information and belief, Defendant has induced and continues to induce others to infringe at least claims 11, 12, and 18 of the '247 Patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including, but not limited to Defendant's partners, clients, customers/subscribers, and end users, whose use of the ASUS Accused '247 Instrumentalities constitute direct infringement of at least one claim of the '247 Patent.

124. In particular, Defendant's actions that aid and abet others such as its partners, customers/subscribers, clients, and end users to infringe include advertising and distributing the ASUS Accused '247 Instrumentalities, and providing instruction materials, training and services regarding the ASUS Accused '247 Instrumentalities.

125. Any party, including Defendant's partners, clients, customers/subscribers, and end users, using the ASUS Accused '247 Instrumentalities necessarily infringes the '247 Patent because the inventions of the '247 Patent are required to comply with the LTE cellular standard (3GPP TS 36.212 and TS 36.321). Defendant advertises its ASUS Accused '247 Instrumentalities as compliant with LTE, which induces others to infringe the '247 Patent. Defendant has knowingly induced infringement since at least as early as the filing of Plaintiffs' Original Complaint on August 27, 2021.

126. Upon information and belief, Defendant is liable as a contributory infringer of the '247 Patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States the ASUS Accused '247 Instrumentalities that infringe the patented inventions, to be especially made or adapted for use in an infringement of the '247 Patent. Each of the ASUS Accused '247 Instrumentalities is a material component for use in practicing the '247 Patent and is specifically made and not a staple article of commerce suitable for substantial non-infringing use. In particular, each of the ASUS Accused '247 Instrumentalities is advertised to be compliant with the relevant standards and primarily used in compliance with such standards.

127. Pantech Wireless has been harmed by Defendant's infringing activities.

DAMAGES

As a result of Defendant's acts of infringement, Plaintiffs have suffered actual and consequential damages. To the fullest extent permitted by law, Plaintiffs seek recovery of damages at least in the form of reasonable royalties.

JURY DEMAND

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Plaintiffs demand a trial by jury on all issues triable as such.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs demand judgment for themselves and against Defendant as follows:

- A. An adjudication that Defendant has infringed U.S. Patent Nos. 9,548,839, 10,841,142, 9,769,776, 9,392,582, 9,763,283, and 10,869,247;
- B. An award of damages to be paid by Defendant adequate to compensate Plaintiffs for Defendant's past infringement of the Asserted Patents, and any continuing or future infringement through the date such judgment is entered, including interest, costs, expenses and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;
- C. A declaration that this case is exceptional under 35 U.S.C. § 285, and an award of Plaintiffs' reasonable attorneys' fees; and
- D. An award to Plaintiffs of such further relief at law or in equity as the Court deems just and proper.

Dated: October 25, 2021

Respectfully submitted,

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